## AMENDMENTS TO THE CLAIMS:

**Please add new claims 24-26 and amend the claims as follows:**

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1.      (Currently Amended) An invisible information recording method comprising:

extracting a location of at least one blank area of a page image of a sheet of paper,

wherein said location of said at least one blank area is different from a location of an image,

which is visible to the naked eye, of said page image of said sheet of paper; and

recording a digital image on said location of said at least one blank area on said sheet

of paper:

wherein said digital image comprises information in the form of pixels so sized as to

be invisible to a naked eye and at a print density invisible to the naked eye,

wherein said extracting comprises extracting a plurality of locations of blank areas

from said page image of said sheet of paper,

wherein said plurality of locations of blank areas extracted from said page image of

said sheet of paper include at least one blank area which is located in a position on said page

image of said sheet of paper other than a location of a margin of said sheet of paper, and

wherein no part of said digital image is recorded in said location of said image of said

page image of the sheet of paper.


2.      (Original) The invisible information recording method according to claim 1, wherein

each of the pixels so sized as to be invisible to the naked eye is 75μm or less in diameter.


3.      (Original) The invisible information recording method according to claim 2, wherein

each of the pixels so sized as to be invisible to the naked eye corresponds to one or a plurality

of image forming elements used for a device for forming a digital image.

4.     (Original) The invisible information recording method according to claim 1, wherein each of the pixels so sized as to be invisible to the naked eye is printed using a yellow color developer.

5.     (Original) The invisible information recording method according to claim 4, wherein the yellow color developer is formed of an ink or toner.

6.     (Original) The invisible information recording method according to claim 1, wherein each of the pixels so sized as to be invisible to the naked eye is printed using an ultraviolet rays color developer.

7.     (Original) The invisible information recording method according to claim 6, wherein the ultraviolet rays color developer is formed of an ink or toner.

8.     (Currently Amended) ~~The invisible information recording method according to claim 2,~~ An invisible information recording method comprising:

extracting a location of at least one blank area of a page image of a sheet of paper, wherein said location of said at least one blank area is different from a location of an image, which is visible to the naked eye, of said page image of said sheet of paper; and

recording a digital image on said location of said at least one blank area on said sheet of paper;

wherein said digital image comprises information in the form of pixels so sized as to be invisible to a naked eye and at a print density invisible to the naked eye,

wherein said extracting comprises extracting a plurality of locations of blank areas

from said page image of said sheet of paper,

wherein each of the pixels so sized as to be invisible to the naked eye is 75μm or less

in diameter, and

wherein a print density invisible to the naked eye is such that the pixels each so sized

as to be invisible to the naked eye are coarsely distributed and an image density is 0.1 or less.


9.     (Currently Amended) ~~The invisible information recording method according to claim~~

~~1,~~ An invisible information recording method comprising:

extracting a location of at least one blank area of a page image of a sheet of paper,

wherein said location of said at least one blank area is different from a location of an image,

which is visible to the naked eye, of said page image of said sheet of paper; and

recording a digital image on said location of said at least one blank area on said sheet

of paper;

wherein said digital image comprises information in the form of pixels so sized as to

be invisible to a naked eye and at a print density invisible to the naked eye,

wherein said extracting comprises extracting a plurality of locations of blank areas

from said page image of said sheet of paper, and

wherein each print density invisible to the naked eye is such that such a block that one

or a plurality of image forming elements of a digital image forming apparatus is a

representative point in a unit consisting of 16 image forming elements is a recording unit.


10.    (Original) The invisible information recording method according to claim 9, wherein

adjacent six recording units form one significant block, and information is recorded in the

significant block.

11.     (Previously presented) The invisible information recording method according to claim

10, wherein at least one of the significant blocks comprises a recording unit which always

represents "1".

12.     (Previously presented) The invisible information recording method according to claim

10, wherein at least one of the significant blocks comprises a recording unit representative of

a parity check.

13.     (Previously presented) The invisible information recording method according to claim

1, wherein such information formed by coarsely distributing the pixels each so sized as to be

invisible to the naked eye so as to include a print density invisible to the naked eye is

recorded into said plurality of locations of blank areas on one page of a digital image.

14.     (Original) A recording apparatus for recording invisible information on a sheet of

paper according to any one of claims 1 to 11.

15.     (Currently Amended) A printing system including an archiving printer which prints a

document upon receipt of a request of printing the document, and at the same time stores the

document as document data into an archive, and upon receipt of a request of reprinting the

document stored, reprints the document by using the document data stored in the archive, the

archiving printer comprising:

        a blank area extracting section that extracts  locations of  a plurality of blank areas in

a page image of a document, wherein said locations of each of said plurality of blank areas is

different from a location of an image, which is visible to the naked eye, in said page image of said document; and

a recording section for recording archive management information on storage locations of documents in the archiving printer in to at least one of said plurality of blank areas of said document when the document is printed, in a state that the information is invisible to the human eye or needs a careful watching to see the information;

a reading section for reading out the information being recorded in the printed document in a state that the information is invisible to the human eye or needs a careful watching to see the information, by reproducing the document printed by the archiving printer by means of reproducing means; and

a knowing section for knowing the archive management information of the printed document from the read out information,

wherein said plurality of locations of blank areas extracted from said page image of said sheet of paper include at least one blank area which is located in a position on said page image of said sheet of paper other than a location of a margin of said sheet of paper, and

wherein no part of said digital image is recorded in said location of said image of said page image of the sheet of paper.


16. (Previously presented) The printing system according to claim 15, wherein the recording section embeds the archive management information of the document at the time of printing the document in a state that the information is invisible to the human eye or needs a careful watching to see the information;

the recording section records one and the same information into said plurality of locations of blank areas; and

the reading section includes an optical scanning section for scanning at least a part of the document.

17.    (Previously presented) The printing system according to claim 15, wherein the recording section records the archive management information of the document at the time of printing the document in a state that the information is invisible to the human eye or needs a careful watching to see the information;

the recording section records one and the same information into said plurality of locations of blank areas; and

the reading section includes an optical scanning section for scanning at least a part of the document.

18.    (Previously presented) The invisible information recording method according to claim 1, wherein said recording the digital image comprises recording the digital image only in one of said plurality of blank areas of said page image of said sheet of paper.

19.    (Previously presented) The invisible information recording method according to claim 1, wherein said recorded information comprises at least one of a horizontal arrangement and a vertical arrangement in said plurality of blank areas of said page image of said sheet of paper.

20.    (Previously presented) The invisible information recording method according to claim 1, wherein said extracting comprises extracting a plurality of substantially rectangular blank areas from said page image of said sheet of paper.

21.    (Canceled).

22.     (Previously presented) The invisible information recording method according to claim 1, wherein said recording the digital image comprises recording a copy of at least a portion of said information into at least one other location of said plurality of locations of said blank areas.

23.     (Previously presented) An invisible information recording method comprising:

extracting locations of a plurality of blank areas of a page image of a sheet of paper, wherein each of said locations of said blank areas are different from locations of images, which are visible to the naked eye, of said page image of said sheet of paper; and

recording a plurality of image forming elements used for a device for forming a digital image in said locations of said blank areas on said sheet of paper;

wherein said digital image comprises information in the form of pixels so sized as to be invisible to a naked eye and at a print density invisible to the naked eye,

wherein a print density invisible to the naked eye is such that the pixels each so sized as to be invisible to the naked eye are coarsely distributed and an image density is 0.1 or less,

wherein said recorded information comprises at least one of a horizontal arrangement and a vertical arrangement in said blank areas of said page image of said sheet of paper, and

wherein said recording the digital image comprises recording a copy of at least a portion of said information into at least one other location of said plurality of locations of said blank areas.

24.    (New) The invisible information recording method according to claim 1, wherein a print density invisible to the naked eye is such that the pixels each so sized as to be invisible to the naked eye are coarsely distributed and an image density is 0.1 or less.

25.    (New) The printing system according to claim 15, wherein the state of the information which is invisible to the human eye is such that pixels of the information each so sized as to be invisible to the human eye are coarsely distributed and an image density is 0.1 or less.

26.    (New) The printing system according to claim 15, wherein the state of the information which is invisible to the human eye is such that such a block that one or a plurality of image forming elements of a digital image forming apparatus is a representative point in a unit consisting of 16 image forming elements is a recording unit.